wrung-out sponge, and provided with many air passages.)

4. You may want to enhance (speed up) the breakdown of the organic materials by adding an activator. If so, over the layer of plant materials, sprinkle garden fertilizer (e.g., 10-10-10); bone meal, blood meal, and other "meals"; or, manure (fresh or dry) such as cow, chicken, goat, rabbit, etc. DO NOT USE cat, dog or human waste. An activator is very high in nitrogen, promoting rapid and thorough decomposition.

5. Next, add a layer of soil 1 to 2-inches thick. The soil contains the microorganisms that help start the decomposition process and binds nutrients to the compost which otherwise would leach out.

6. Continue to alternate the layers of organic materials, soil, fertilizer (optional) and water until the pile reaches between three and five feet high.

The top of the pile should be left flat or with a slight depression in the center to catch rain or added water.

7. The compost pile must be kept moist (but not soggy) for proper heating and decomposition. A well constructed heap should begin heating up in a few days. Using a garden fork or shovel, turn the pile every 7-10 days. Thoroughly turn the inner part of the pile out to the sides and turn the outer parts of the pile to the center. Moving composted material out of the hot center and replacing it with partially composted material from the sides greatly speeds the composting process. Check the moisture of the pile at the time of turning and remoisten if needed.

Normally, compost will be ready for use in four to six months. However, the length of time required will vary depending on the types of organic materials used, size of the pile, climate conditions during the composting period and the time of year. As material decomposes, the pile should shrink to about half of its original height.

USING COMPOST

Finished compost is dark brown or black (like potting soil), crumbly-textured, and has a rich earthy smell. However, there is no exact point at which compost is "finished." Many gardeners use compost that is not fully decomposed. The bits of leaves, minute twigs, straw, hay, etc., will finish decomposing in the soil in their yard or garden. If you plan to use compost in seed starting mixes, houseplants, or to cover seed rows, be sure it is well rotted (possibly screened).

Compost can be used as "top dressing" for lawns, for mulching around landscape and garden plants, or anywhere that additional soil is needed.

TROUBLESHOOTING YOUR PILE

1. Problem: compost pile does not heat up

Symptom/Cause: compost material too wet

Solution: turn pile or add more brown material

Sympton/Cause: compost material too dry

Solution: moisten pile

Sympton/Cause: too much brown material

Solution: turn pile and add more green material

2. Problem: odor

Sympton/Cause: ammonia smell/too much green matter

Solution: turn pile and add more brown material

Sympton/Cause: rotten egg smell/pile too wet or not enough oxygen

Solution: turn pile and add more brown material

The City of Columbus' Keep Columbus Beautiful program thanks you for your interest in improving your communities. If you have any questions about the information in this pamphlet, or questions about Keep Columbus Beautiful in general, please call 645-8027.

Recycle. Ohio!

City of Columbus
Mayor Michael B. Coleman

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KEEP COLUMBUS BEAUTIFUL

Backyard Composting

The City of Columbus' Keep Columbus Beautiful is a community improvement program that promotes and coordinates litter cleanups, graffiti prevention, recycling, and beautification projects.

(614) 645-8027
www.keepcolumbusbeautiful.org

WHY COMPOST?

The waste stream out of your home can be lessened by as much as 35% just by composting kitchen and yard wastes.

Composting these wastes helps to protect the environment, saves money and improves the soil.

Disposal of leaves, grass clippings and other garden refuse is often a problem for homeowners. This material can be turned into useful compost very readily. Returning these organic materials to the soil perpetuates natural biological cycles, and is an ecologically sensible means of using organic wastes.

Did you know there is a connection between compost and nutrition? There are 23 mineral nutrients needed for human health that comes from the soil that are absorbed and converted by plants into food nutrients. Besides containing nutrients, another benefit of compost is in improving soil characteristics. It improves texture and aeration, increases the soil's ability to retain water, and decreases erosion.

HOW IS COMPOST FORMED?

Composting requires five ingredients: organic matter, nitrogen, microoganisims, water and oxygen. Composting changes the nutrients in raw organic materials to a form that can be absorbed by the roots of growing plants. In a moist and oxygen rich environment, microoganisms such as soil bacteria and fungi (often aided by tiny scavengers such as insects, mites and earthworms) accomplish this task by secreting enzymes that breakdown (decompose) the organic materials. The activity of these microorganisms can generate temperatures inside the compost pile in excess of 130°F - high enough to kill most weed seeds and disease organisms.

WHAT CAN BE COMPOSTED?

Many types of organic materials can be used for composting:

Grass clippings
Weeds
Fallen leaves
Pine needles
Remains of garden plants
Straw or hay
Sawdust
Wood ashes
Many other kinds of plant refuse

Twigs should not be added unless they are chipped because they decompose very slowly. Avoid yard waste that is diseased; full of weeds gone-to-seed; toxic; sprayed with pesticides, herbicides or fungicides; weeds or grasses that can re-sprout; or, otherwise questionable materials.

Most organic household garbage can also be composted. This includes:

Fruit rinds, cores and peels
Vegetables, vegetable leaves and skins
Tea leaves
Coffee grounds
Stale bread
Eggshells

DO NOT put fats, grease, bones, dairy products and meat scraps in your compost pile because they decompose very slowly, creating unpleasant odors, and attract animals. A good compost pile has no odor and does not attract flies or rodents.

Manure is an excellent nitrogen source. The best is from grass eaters such as cows, and from chickens and rabbits (avoid horse manure as it tends to have more weed seeds). DO NOT USE human, cat or dog wastes (they carry diseases). You can get manure at a farm or garden store.

Decomposition of organic material in your compost pile works best when you create the proper balance between carbon-rich components (called "brown" because they are dry) and the nitrogen-rich materials (called "green" because they are fresh). It is desirable to add as many different organic items as possible and in a ratio of three parts brown to one part green. This insures a variety of nutrients and a good consistency to compost.

MAKING YOUR COMPOST PILE

1. Locate the compost pile in a convenient but inconspicuous location (e.g., near the house, back door, porch, garage, or garden). Select a level, well-drained spot, preferably in full sun. Since the compost pile needs to be kept moist, a convenient source of water (such as a water spigot or hose) is helpful.

2. A compost bin is not necessary but does make it easier to build and maintain a pile. Woven wire, cement blocks without mortar, lumber, snow fence, hay bales, railroad ties, or brick can be used to enclose a compost pile. Whatever enclosure is used, adequate air movement through the sides is necessary. Construction of one removable wall allows easy access for turning the pile with a shovel or pitchfork. Some people build adjacent bins, turning the material from one to the other.

The size of the pile may vary, but ideally the size for fast, hot compost is between 3'x3'x3' and 5'x5'x5'. Piles smaller than 3'x3'x3' lose heat too rapidly and those larger than 5'x5'x5' prohibit adequate air from reaching the pile's center.

3. Begin by removing the grass or sod from the area where the pile will be placed. Direct contact with the soil ensures that the organic material will be exposed to the decomposing microbes. Begin the pile by spreading a 6 to 8-inch layer of organic matter directly on the ground. A layer of brush (or coarsely chopped woody material) on the bottom will hold the pile off the ground to allow water to drain and help aerate it. Materials that tend to mat, such as grass clippings, should be placed in layers only 2 to 3-inches thick. Moisten, but do not soak, the layers of organic material. (Note: Compost should never get soggy wet or the decomposition will stop. Compost piles will function best when about as moist as a